II. CLAIM AMENDMENTS

1. (Currently Amended)   A coupling unit ~~adapted to be coupled between~~<u>for coupling</u> a first and a second unit to be tested,

> said coupling unit comprising a first signal path ~~that is adapted to provide~~<u>providing</u> a signal connection between at least one terminal of the first unit to be tested and at least one terminal of the second unit to be tested;

> with said first signal path comprising a signal conditioning facility ~~adapted for~~ receiving a first signal from the first unit to be tested, ~~for~~ conditioning said first signal in accordance with predefined parameters, and ~~for~~ providing the conditioned first signal to the second unit to be tested;

> said coupling unit further comprising a second signal path ~~that is adapted to provide~~<u>providing</u> a signal connection between the at least one terminal of the second unit to be tested and the at least one terminal of the first unit to be tested ~~for~~<u>, the signal connection</u> receiving a second signal from the second unit to be tested and providing the second signal to the first unit to be tested; and

> first switching facilities ~~adapted for~~ switching the signal path ~~so as~~ to select a signal of said first signal path or said second signal path.

2. (Currently Amended)   The coupling unit of claim 1, comprising at least one of the features:

> said first signal path ~~is adapted for~~ substantially ~~preserving~~<u>preserves</u> the first signal's information content;

> the transmission properties of the first signal path are determined by said predefined parameters;

> said first signal is implemented as a single-ended signal.

3. (Currently Amended)   The coupling unit of claim 1, ~~wherein~~ said signal conditioning facility ~~comprises~~<u>comprising</u> a comparator unit ~~adapted for~~ comparing

said first signal, or a signal derived therefrom, with a predefined threshold level, ~~whereby~~to set said threshold level ~~is set~~ in accordance with said predefined parameters.

4. (Currently Amended)   The coupling unit of claim 1, ~~wherein~~ said signal conditioning facility ~~comprises~~comprising a delay unit, preferably a variable delay unit, adapted to provide a delay for a signal traveling on the first signal path.

5. (Currently Amended)   The coupling unit of claim 4, comprising at least one of the features:

the coupling unit further comprises a control unit ~~adapted for~~controlling the delay of said delay unit;

the coupling unit further comprises a control unit ~~adapted for~~controlling the delay of said delay unit by applying a control signal for modifying the delay over the time;

the delay induced by said delay unit is controlled in order to vary at least one of a set-up time and a hold time of a digital data signal, ~~wherein~~ the set-up time ~~represents~~representing a time between a start of a valid data signal and a start of a valid clock signal, and the hold time ~~represents~~representing a time between the start of the valid clock signal and an end of the valid data signal.

6. (Original) The coupling unit of claim 1, wherein skew is imposed on the first signal by setting the delay of the first signal path according to a skew signal, with said skew being imposed in accordance with said predefined parameters.

7. (Original) The coupling unit of claim 1, wherein jitter is imposed on the first signal by modulating the delay of the first signal path according to a jitter signal, with said jitter being imposed in accordance with said predefined parameters.

8. (Currently Amended)   The coupling unit of claim 1, wherein said first signal path ~~is adapted to provide~~provides a single-ended signal connection.

9. (Currently Amended)   The coupling unit of claim 1, wherein said first signal path ~~is adapted to provide~~provides a differential signal connection for transmitting a

differential signal comprising a normal signal and a complementary signal being complementary to the normal signal.

10. (Currently Amended)   The coupling unit of claim 9, comprising at least one of the features:

the first signal path comprises a differential input unit ~~adapted for~~ receiving the differential signal and ~~to provide~~providing as output a single-ended signal representing one of: the normal signal or a signal derived therefrom, the complementary signal or a signal derived therefrom, or a difference signal as the signal difference between the normal signal, or a signal derived therefrom, and the complementary signal, or a signal derived therefrom;

the first signal path comprises a differential output unit ~~adapted to derive~~deriving, from its input signal, a differential output signal, and ~~to provide~~providing the differential output signal to the second unit to be tested;

the signal conditioning facility ~~is adapted for~~deriving a common mode signal from the differential signal;

the signal conditioning facility ~~is adapted for~~deriving a common mode signal from the differential signal and ~~to provide~~providing at least one of:

setting the common mode signal to a predefined level, with said predefined level being set in accordance with said predefined parameters, and

superimposing, in accordance with said predefined parameters, at least one of an arbitrary waveform and a noise signal onto the common mode signal.

11. (Currently Amended)   The coupling unit of claim 1, ~~wherein~~ said signal conditioning facility ~~comprises~~comprising a driver adapted for transforming said first signal, or a signal derived therefrom, into an output signal with at least one output level, ~~whereby~~to set said at least one output level ~~is set~~ in accordance with said predefined parameters.

12. (Original) The coupling unit of claim 1, comprising at least one of the features:

the second unit to be tested is substantially complementary in function to the first unit to be tested;

the first and second units to be tested are comprised by either one device or each by a different device;

the coupling unit is a loop-back unit;

at least one of the units to be tested comprises a physical interface, in particular a serial interface such as PCI Express, HyperTransport, Serial ATA, Rapid IO, FibreChannel, Embedded SerDes, XAUI, with at least one of the terminals of the units to be tested being part of said physical interface.

13. (Currently Amended) The coupling unit of claim 1, comprising second switching facilities ~~adapted for~~ switching between said first signal path and a wire loop adapted for bypassing the signal conditioning facility of the first signal path.

14. (Currently Amended) The coupling unit of claim 1, comprising third switching facilities ~~adapted for~~ switching the signal path in a way that at least one terminal of one of the units to be tested is connected with an external resource~~, in particular with an external channel~~.

15. (Currently Amended) The coupling unit of claim 1, ~~wherein~~ the second signal path ~~comprises~~comprising a second signal conditioning facility ~~adapted for~~receiving a second signal from the second unit to be tested, ~~for~~ conditioning said second signal in accordance with predefined parameters, and ~~for~~ providing the conditioned second signal to the first unit to be tested.

16. (Cancelled)

17. (Currently Amended) A testing system ~~adapted~~ for testing at least one of a first and a second unit to be tested, comprising

at least one coupling unit of claim 1 ~~that is~~ coupled between the first and the second unit to be tested, and

a signal analysis unit ~~adapted to analyze~~analyzing a response signal received from the second unit to be tested in response to a stimulus signal provided to the first unit to be tested.

18. (Currently Amended)   The testing system of claim 17, further comprising a signal source~~, in particular a pattern generator, adapted to provide~~providing the stimulus signal to the first unit to be tested.

19. (Currently Amended)   The testing system of claim 17, ~~wherein~~ said signal conditioning facility ~~is adapted for~~ degrading the first signal traveling on said first signal path until the conditioned first signal is no longer correctly received by the second unit to be tested.

20. (Currently Amended)   The testing system of claim 19, ~~wherein~~said first signal conditioning facility ~~is adapted for~~degrading the first signal traveling on said first signal path by at least one of:

varying the at least one output level of the conditioned first signal;

varying the amount of jitter imposed upon the first signal;

varying the amount of skew imposed upon the first signal;

varying a common mode signal's noise level;

varying an arbitrary waveform signal imposed upon a common mode signal.

21. (Currently Amended)   A method for testing operation of at least one of a first and a second unit to be tested, said method comprising~~the steps of~~:

receiving a first signal from the first unit to be tested;

conditioning the first signal in accordance with predefined parameters~~,~~ ~~whereby~~ to preserve the first signal's information content~~is preserved~~;

providing the conditioned first signal as an input signal to the second unit to be tested;

receiving a second signal from the second unit to be tested;

conditioning the second signal in accordance with predefined parameters; and

providing the conditioned second signal as an input signal to the first unit to be tested.

22. (Currently Amended)   The method of claim 21, comprising ~~a step of~~ applying a stimulus signal to the first unit to be tested.

23. (Currently Amended)   The method of claim 21, comprising ~~steps of~~ receiving a response signal from the second unit to be tested and of analyzing the response signal.

24. (Currently Amended)   The method of claim 23, wherein ~~the step of~~ analyzing the response signal comprises ~~a step of~~ comparing the response signal with an expected response signal representing a signal expected to ~~receive~~be received in response to the stimulus signal.

25. (Currently Amended) ~~A~~The coupling unit of claim 1, comprising:

> ~~wherein there are~~ one or more of said first signal path~~, each adapted to provide~~ providing a signal connection between an output of the first unit to be tested and an input of the second unit to be tested, wherein at least one of the one or more signal paths comprises a delay unit adapted to provide a delay for a signal traveling on the signal path.

26. (Currently Amended) The coupling unit of claim 25, comprising at least one of the features:

> wherein at least one delay unit is a variable delay unit ~~adapted to provide~~providing a variable delay for the signal traveling on the signal path;
>
> the coupling unit further ~~comprises~~comprising a control unit ~~adapted for~~ controlling the delay of one or more of the delay units~~, preferably by applying a control signal for modifying the delay over the time~~;
>
> the second unit to be tested ~~is~~being substantially complementary in function to the first unit to be tested;

the coupling unit further ~~comprises~~comprising:

one or more data signal paths, each coupled between a data output of the first unit to be tested and a data input of the second unit to be tested, ~~wherein~~ the data output ~~is adapted to provide~~providing a data signal and the data input ~~is adapted to receive~~receiving the provided data signal,

a clock signal path between a clock output of the first unit to be tested and a clock input of the second unit to be tested, ~~wherein~~ the clock output ~~is adapted to provide~~providing a clocking signal to be received by the clock input for clocking one or more of the received data signals, ~~wherein~~ at least one of the clock signal path and the one or more data signal paths ~~comprises~~comprising the delay unit;

wherein the first and second units to be tested are comprised by either one device or each by a different device;

wherein the coupling unit is a loop-back unit.